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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Guido Luigi Daghini

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EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

02/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,633	Applicant(s) DAGHINI ET AL.	
	Examiner Justin R. Fischer	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-49, 51 and 54-66 is/are rejected.
- 7) ☒ Claim(s) 50, 52 and 53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 22, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 31-37, 39-48, 51, and 54-66 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (JP 58-4610, newly cited) and further in view of Miyazaki (US 2001/0037487, of record) and optionally in view of Pneumatiques (GB 1091507).

Yamashita teaches a tire construction including a carcass structure 6, a pair of bead fillers 4, a pair of annular reinforcing elements or bead cores 3, at least one flipper 5, a tread band 1, a belt structure 10, and at least one pair of sidewalls, wherein said flipper completely envelops said filler and said bead core. Yamashita, however, is completely silent with respect to the type of cord materials used in said flipper (as obtained from oral translation by USPTO translator). In any event, it is extremely well

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known to use the claimed metallic cords in the manufacture of bead reinforcing layers (one example of which is a flipper), as shown for example by Miyazaki (Abstract and Paragraph 1). Miyazaki specifically teaches that the claimed metallic cord provides improved rubber penetration without a corresponding increase in diameter.

Pneumatiques is optionally applied to evidence the specific use of metallic reinforcing cords (in general) in tire flippers (Page 2, Lines 35-45). Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to use the metallic cord of Miyazaki in the flipper of Yamashita. Lastly, the preformed filaments of Miyazaki have a diameter between 0.17 mm and 0.25 mm, which falls entirely within the range of the claimed invention (Paragraph 42).

Regarding claims 32-35 and 43-46, the cord of Miyazaki include waved filaments and unwaved filaments, wherein the term "waved filaments" includes sinusoidal arrangements (Paragraph 48).

As to claims 36, 37, 47, 48, 57, and 62, Miyazaki suggests a wave pitch (wavelength) between 5 and 30 times the filament diameter and a wave height (amplitude) between 0.5 and 4 times the filament diameter (Paragraph 60). Given the diameter ranges noted above, Miyazaki teaches a wide range of cord constructions that satisfy the broad ranges of the claimed invention. It is further noted that the claims define absolute dimensions and it is well recognized that cord constructions vary as a function of the size of the tire (and the intended use)- one of ordinary skill in the art at the time of the invention would have found it obvious to select an amplitude and

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wavelength in accordance to the claimed invention absent a conclusive showing of unexpected results.

With respect to claims 39 and 40, flipper 5 comprises a pair of legs that are in direct with bead filler 4 and a central portion that directly contact the annular reinforcing element 3. It is further evident from Figure 3 that the flipper ends are offset from one another.

Regarding claim 41, the tire of Yamashita includes a pair of chafer 9. Given the disclosure of Miyazaki, one of ordinary skill in the art at the time of the invention would have been equally motivated to form chafer strips 9 (type of bead reinforcing layer) from cords comprising at least one preformed filament. It is emphasized that chafer strips are well recognized as being "bead reinforcing layers".

As to claim 51, chafer strips 9 are positioned axially external of the carcass plies 6.

With respect to claims 54 and 59, the filaments of Miyazaki are formed of steel.

Regarding claims 55 and 60, Miyazaki teaches the use of a metallic coat to improve adhesion (Paragraph 98) and each of the claimed metal coatings represent the well known and conventional coatings used in the tire industry.

As to claims 56, 57, 61, and 62, Miyazaki suggests the inclusion of at least 2 waved filaments (Paragraph 43).

Regarding claims 58 and 63, the disclosed cord densities define an extremely broad range (between approximately 10 and 40 epi) that is consistent with densities conventionally used in a wide variety of tire components, including flippers. Absent a

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conclusive showing of unexpected results, one of ordinary skill in the art would have found it obvious to form the flipper of Yamashita in accordance to the claimed invention.

With respect to claims 64 and 65, flipper 5 is formed of cords inclined between 20 and 70 degrees with respect to the radial plane of the tire and chafer 9 is formed of cords inclined between 50 and 70 degrees with respect the radial plane (as obtained from oral translation by USPTO translator).

Regarding claim 66, Yamashita is broadly directed to a radial tire construction- a fair reading of the reference suggests the general manufacture of pneumatic tires having the disclosed construction and such would include the claimed "high or very high performance tire".

4. Claims 31-35, 38-46, 49, 51, 54, 58, 59, and 63-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita and further in view of Ikehara (US 5,584,169) and Miyazaki.

Yamashita teaches a tire construction including a carcass structure 6, a pair of bead fillers 4, a pair of annular reinforcing elements or bead cores 3, at least one flipper 5, a tread band 1, a belt structure 10, and at least one pair of sidewalls, wherein said flipper completely envelops said filler and said bead core. Yamashita, however, is completely silent with respect to the type of cord materials used in said flipper (as obtained from oral translation by USPTO translator). In any event, it is extremely well known to use the claimed metallic cords in the manufacture of bead reinforcing layers (one example of which is a flipper), as shown for example by Ikehara (Column 1, Lines 5-15). More particularly, Ikehara teaches that such a metallic cord provides improved

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corrosion resistance. It is further noted that a fair reading of Ikehara suggests the general use of such a cord in tire components (disclosure of belt plies is only exemplary) and thus, one of ordinary skill in the art at the time of the invention would have found it obvious to use the metallic cord of Ikehara in the flipper of Yamashita. Miyazaki is applied to further evidence the known use of similar cords having preformed filaments in belt plies and/or bead reinforcing layers (abstract). Lastly, the claimed filament diameter is consistent with the conventional range of values used in the tire industry, as shown for example by Miyazaki (Paragraph 42).

Regarding claims 32-35, 38, 43-46, and 49, the cord of Ikehara includes a preformed filament in the form of a sine curve or a helical configuration (Column 4, Lines 45-67 and Column 6, Lines 5-13).

With respect to claims 39 and 40, flipper 5 comprises a pair of legs that are in direct with bead filler 5 and a central portion that directly contact the annular reinforcing element 3. It is further evident from Figure 3 that the flipper ends are offset from one another.

Regarding claim 41, as noted above, the tire of Yamashita includes a pair of chafers 9. Given the disclosure of Ikehara and Miyazaki, one of ordinary skill in the art at the time of the invention would have been equally motivated to form chafer strips 9 from cords comprising at least one preformed filament. In particular, chafer strips are well recognized as being "bead reinforcing layers".

As to claim 51, chafer strips 9 (one on each tire side) are positioned axially external of the carcass plies 6.

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With respect to claims 54 and 59, the filaments of Ikehara are formed of steel.

Regarding claims 58 and 63, the disclosed cord densities define an extremely broad range (between approximately 10 and 40 epi) that is consistent with densities conventionally used in a wide variety of tire components, including flippers. Absent a conclusive showing of unexpected results, one of ordinary skill in the art would have found it obvious to form the flipper of Yamashita in accordance to the claimed invention.

Regarding claims 64 and 65, flipper 5 is formed of cords inclined between 20 and 70 degrees with respect to the radial plane of the tire and chafer 9 is formed of cords inclined between 50 and 70 degrees with respect the radial plane (as obtained from oral translation by USPTO translator).

Regarding claim 66, Yamashita is broadly directed to a radial tire construction- a fair reading of the reference suggests the general manufacture of pneumatic tires having the disclosed construction and such would include the claimed "high or very high performance tire".

Allowable Subject Matter

5. Claims 50, 52, and 53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 31-49, 51, and 54-66 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791